

MODIS Technical Team Meeting
Thursday, January 4, 2001
3:00 PM

Bob Murphy chaired the meeting. Present were Sol Broder, Bill Barnes, Wayne Esaias, Eric Vermote, Bruce Guenther, Dorothy Hall, Bruce Ramsay, Steve Kempler, Skip Reber, Chris Justice, Robert Fennimore, Lt. Mike Hopkins, and Barbara Conboy, with Rebecca Lindsey taking the minutes.

1.0 Schedule of Upcoming events

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| • MCST Meeting
Columbia Sheraton Hotel | January 22, 2001 |
| • Land Validation Meeting
Columbia Sheraton Hotel | January 22-23, 2001 |
| • Ocean Group Meeting
Columbia Sheraton Hotel | January 23, 2001 |
| • Atmosphere Group Meeting
GSFC (Bldg. 33, H114) | January 23, 2001 |
| • MODIS Science Team Meeting
Columbia Sheraton Hotel | January 24 - 25, 2001 |
| • MODIS Land Discipline Meeting | January 26, 2001 |
| • MODIS Oceans Discipline Meeting | January 26, 2001 |
| • EOS Investigator Working Group meeting
Ft. Lauderdale, Florida | January 30 - February 1, 2001 |
| • SWGD Data Distribution Workshop | February 1, 2001 (at the IWG) |

2.0 Meeting Minutes

Murphy began the meeting by announcing that George Morrow is leaving to go to Jackson-Tull.

2.1 Instrument Update (This update was provided in writing by Mike Roberto, who was unable to attend.)

Terra MODIS

The EOS Terra MODIS continues its operation without formatter faults since the switch to the B side electronics on October 30th. The modulation of the solar diffuser stability monitor continues to be investigated by SBRS and MCST. There may be a tilt between the SDSM entrance aperture and the solar screen.

Heater power requirements to maintain the temperature of the cold focal planes have been staying pretty constant recently. This is likely related to the changing solar angle. However, the overall radiative cooler performance seems significantly improved since it was out gassed last August.

Aqua MODIS

EOS Aqua personnel are still having trouble with the spacecraft Formatter Multiplexor Unit, which handles the data before it goes to the solid state recorder. This could result in a delay for the system Comprehensive Performance Test, which would subsequently affect the start date for the thermal vacuum test. SBRS and Starsys continue to investigate the failure of the space-view door fail-safe actuator. X-ray investigation of the actuator did not show any problems.

2.2 GES DAAC Update

Kempler reported that L1B production is currently 18 days behind real time. While they made up two days in the last two weeks, upcoming downtime (Monday: 24 hours for planned upgrades; Wednesday: 12 hours for power outage) will drop production back again. Ultimately, the upgrades should provide faster processing, though not necessarily 2x.

Kempler said that while they cannot exclude the possibility of an installation glitch that might interfere with production for longer than 24 hours, this same upgrade has been previously installed in two other DAACs successfully. Kempler indicated that they would be watching everything closely. He also reported that he asked the PI Processing group whether such a glitch would negatively impact the Team's ability to prepare for the upcoming Science Team Meeting, and the answer was no. (Post-meeting note: The ECS upgrade was successfully installed in fewer than 12 hours, and is running well.)

2.3 SDST Update

Masuoka passed out charts (Attachments 1, 2, and 3) that show archive volumes of MODIS data ingested at the EDC, NSIDC and GES DAACs from February 2000 to the present. The current production (including the 250-m resolution

products) was compared to the 2/96 baseline, the 2/96 baseline with ramp-up, the Team's 11/00 goal, and finally, the total FY01 storage capacity.

The charts indicate that MODIS production is not in danger of exceeding available storage capacity in FY01. The only exception is the NSIDC DAAC's 13.5 TB of storage, which may be insufficient toward the end of the year. The estimates, however, do not include Aqua product volumes.

Masuoka reported that MODAPS production had been significantly slowed when a vendor performed an improper firmware upgrade that erased the 10 TB production disk. This meant that all data products needed for production had to be restored from the MODAPS archive, which slowed production to about 0.7x this week. Masuoka reported that, except for Oceans products, MODAPS is about 18 days behind the GES DAAC.

Kempler commented that EDOS delivery had recently improved and that reorder rates were down to about 1%.

2.4 PI Processing Meeting Update

Justice reported on several issues that were discussed at the PI Processing Meeting. First was the issue of the second Golden Month, and whether there was consensus on whether we could sacrifice some amount of forward production in order to prototype reprocessing. Justice suggested at the PIP meeting that SDST develop an experiment that could be used to test our resources on this issue, to find out what fraction of our resources we can put toward a prototyping reprocessing, and what impact that will have on forward production.

The second issue was the need to develop a written position on what steps the team has taken to promote efficiency within the data processing system, in particular PGE efficiencies. At this point, Skip Reber read an excerpt from a letter from Ghassem Asrar to Al Diaz, which outlined a specific request for this information. In response to the shortfall that was predicted at the December 1, 2000, briefing on Terra data products, he expected Goddard to "aggressively pursue the following issues in order to mitigate the projected shortfall: 1.) overall system hardware and software efficiencies, 2) improvements in algorithm efficiencies and 3) reduction in production requirements."

With respect to lowering production requirements, Reber thinks that means things like lower spatial resolution or coverage, less temporal coverage, or fewer products. Soon a letter will be sent out from Jon Ranson that asks each team to address the issues in Asrar's letter. The instrument teams will need to respond to

Ranson's request by the end of January, since Asrar expects this report in the February timeframe.

Finally, Eric Vermote reported that there was discussion at the PIP meeting about the need for a set of definitions describing quality levels of products, including beta, provisional and science-quality products.

2.5 Golden Month Update

GES DAAC is about halfway through the Golden Month (December). This month is consistently processed with respect to algorithms. Bruce wondered whether the DAAC had a plan for testing the effects of the system upgrade on the data products, to verify that results were the same across systems. Murphy suggested that Kempler and Guenther discuss it at the next PIP meeting. MODAPS has metadata changes to make for several MODIS products before they start Golden Month processing.

2.6 Oceans Update:

Esaías reported that they had scheduled a telecon with MCST and University of Miami to continue the discussion of daily orbital variation (RVS differences) and the apparent lack of stability.

2.7 Land Update

Justice reported that the AGU meeting went very well, and that the Land Discipline was well represented, with presentations from Steve Running, Alfredo Huete, John Townshend, and himself. Justice also presented for Vermote.

2.8 NOAA/NESDIS Update

Ramsay introduced Rob Fennimore, NOAA/NESDIS/Office of Satellite Data Processing and Distribution (OSDPD), and Lt. Mike Hopkins, NOAA Corps liaison with OSDPD. They will be working with Ramsay to secure a subset of MODIS Continental U.S. (CONUS) imagery from Direct Broadcast stations at either the Cooperative Institute for Meteorological Satellite Studies at the University of Wisconsin/Madison, and/or from NASA/GSFC per discussions with Dr. Wayne Esaías. The goal is to begin the acquisition of a small subset of near-real-time snow and ice products and U.S. coastal imagery by the end of January 2001 for experimental use and validation in OSDPD and ORA.

2.9 Project Scientist Update

Murphy reported that development of several educational lithographs was underway, and that he'd like the disciplines to provide images and text with an

educational bent. Kempler said that he would provide some things that had been used at the AGU meeting to see if they were of interest for this purpose or for use at the Science Team Meeting.

Also, Murphy indicated that he would be developing a schedule for the discipline leaders to make visits to headquarters to provide MODIS status updates.

Finally, the group discussed the draft agenda for the MODIS Science Team Meeting. The draft was prepared from initial input from Justice. The team discussed a few changes, which will be incorporated by MAST into the next draft and sent out for review.

3.0 Action Items

3.1 Salomonson to send an email to science team about preparing presentations/posters for the IWG meeting.

Status: Closed.

3.2 Kempler to provide a hardware upgrade schedule, including direction on processing power.

Status: Open.

3.3 Discipline leads to meet to resolve the issue of beta-release code and science-quality code, and what we need to say about it.

Status: Open.